Claim Listing

Claims 23-29, 32, 33, and 36-64 are canceled with this amendment. Claims 65-73 are new.

1-64. (Canceled)

65. (New) A data processing system comprising one or more computer processors, wherein said one or more computer processors are programmed to create an interviewing mechanism operable to gather health information from a patient using logic-driven, branching methods designed to identify and then characterize the patient's major, current complaints, so that the system will be practical for use in routine clinics where patient complaints are likely to be multiple and unknown in advance, while still covering the topics desired by a clinician and providing a report that can be used at a time of a clinic visit to prioritize current complaints, thereby facilitating use of clinician time and resources during said patient's assessment;

wherein said interviewing mechanism implements exploratory questions to survey selected topics, such as physical and emotional symptoms;

wherein said exploratory questions ask about groups of related items, such as breathing symptoms or bowel symptoms, so as to minimize how many exploratory questions asked and to reserve detailed questions for positive groups;

wherein, in order to identify relevant topics from among a plurality of possible topics that warrant further questions, exploratory questions determine a time frame of relevance (such as current, past, or never) to said patient and, when positive, a patient's judgment of importance of a topic, which comprises one or more of: a patient's priority

for discussion with the clinician, severity of symptoms, and degree of bother from other health issues;

wherein said interviewing mechanism is operable to select and rephrase subsequent, more detailed questions from an extensive database of potential questions, based upon said patient's responses relating to time frame and importance of a given topic so that interview questioning remains relevant to the patient;

wherein to allow said system to be adapted and configured in advance for requirements of any clinician, clinic, research protocol, or administrative purpose, said interviewing mechanism is operable to match a given patient to a pre-selected interview configuration profile from a hierarchy of such profiles that determine inquiry scope and inquiry depth of a given patient interview, said inquiry scope specifying a set of interview topics to be covered, and said inquiry depth specifying a level of detail for a characterization of elicited symptoms; and

wherein said interviewing mechanism is operable to dynamically integrate input from multiple sources to determine a depth of detailed questioning to pursue, said sources including patient importance, such as the time frame, severity, or priority for discussion with the clinician, desired depth of characterization detail for a topic as determined by a configuration profile, and medical importance of a given topic as determined by experts (such as mild chest pain, which may be of clinical importance, but not judged so by the patient).

66. (New) The system of claim 65, wherein said system is operable to integrate an assessment of characterization detail for related symptoms in a group of associated symptoms, thereby saving time for said patient and allowing integrated reporting of associated symptoms;

(a) wherein potential associations between symptoms are identified at a time of authoring of interview content based upon clinical experience, such as concurrent fever, sweats, headache, and sore throat being part of a common flu;

(b) wherein severities of candidate symptoms in associations are obtained during an interview;

(c) wherein a most severe symptom in an association (hereinafter "index symptom") is identified;

(d) wherein characterization detail is obtained about index symptoms, as appropriate for its clinical relevance or relevance to a patient;

(e) wherein an interview question is asked about whether any of said patient's other symptoms in said association share features in common with said index symptom, such as coming and going together in the same time pattern or in response to the same precipitating and relieving factors;

(f) wherein redundant characterization detail is skipped for associated symptoms and subsequent interview questions characterizing associated symptoms are combined, thereby reducing time and redundancy of an interview; and

(g) wherein a risk of frustrating said patient is reduced by detecting relations between symptoms, when they exist, or allowing symptoms to stand alone, when no association is identified.

67. (New) The system of claim 65 further operable to identify and characterize severity and functional impact of multiple concurrent symptoms, because a plurality of physical and emotional symptoms tend to occur simultaneously in patients and confound clinical assessment of the patient and measurement of impact on quality of life and functional status;

(a) wherein related symptoms, such as bowel symptoms or bone and joint symptoms, are grouped in order to facilitate assessment of symptom severity, frequency, and impact on functional status and quality of life;

(b) wherein identifying and characterizing symptoms and measuring symptom severity anticipates and supports assessment of a plurality of concurrent symptom groups; and

(c) wherein separate scores are calculated for each of said symptom groups, thereby providing a means for determining whether said patient has one or more than one symptom complex and a means for separately assessing severity and functional impact of each symptom group over time.

68. (New) The system of claim 65 further operable to reliably assess impairment in quality of life and functional status in relation to a plurality of symptoms and medical conditions;

(a) wherein quality of life questions are created to probe limitations in a plurality of generic domains that may be related to more than one medical condition, said domains including functions such as walking; exercising or doing physical activities; physical agility, flexibility, and full use of limbs and hands; working or doing other chores; socializing with friends and family; or eating; and

(b) wherein quality of life questions are asked without reference to attribution, defined as whether a limitation is due to a health or emotional condition, injury, or other problem.

69. (New) The system of claim 68 further operable to establish said patient's perception of impact of said patient's plurality of symptoms and medical conditions on quality of life and functional status, thereby providing an addition means to monitor and discriminate the aggregate and specific impact of various symptoms and health conditions that may get better or worse over time or in response to treatment;

(a) wherein said interviewing mechanism is operable to display areas of generic quality of life and functional status that said patient has reported are impaired, offering said patient choices about potential causes of such impairment, such as physical symptoms, health conditions, emotional problems, or other issues; and

(b) wherein said interviewing mechanism is operable to sequentially display each of one or more generic quality of life issues reported by said patient to be limited by symptoms or health conditions, listing various symptoms and health conditions that said patient has reported are most severe or bothersome, and offering response options to indicate a degree to which each symptom or health condition causes limitation of indicated generic quality of life domain; and

(c) wherein impact of each group of related symptoms or each health condition is determined by asking about resulting severity, frequency, functional impact, or degree of bother, and wherein similar questions about all such groups establish the presence and functional impact of a plurality of concurrent symptoms or health conditions.

70. (New) The system of claim 65 further operable to measure and improve quality of care both for individual patients and for health care providers using patient-reported data by directly addressing a problem area during said interview and by providing feedback to clinicians or administrators about areas where action could be taken during a clinic visit to correct apparent problems with quality of care:

(a) wherein to assess quality of care, said system is operable to display questions such as patient understanding of a health condition, patient health attitudes and behaviors, patient willingness to change health behaviors, patient perceptions of communication with a clinician and of whether patients felt heard and respected, patient observation about health care received, patient understanding of what to expect and what to watch out for from their health conditions or their treatment, patient understanding of a treatment

they are receiving, patient understanding of medications they should be using, and patient compliance with medication and with treatment;

(b) wherein quality of care is improved by one or more of a plurality of the following mechanisms: patient-reported quality of care data are integrated into a clinical report and flagged to identify problem areas, so that action can be taken during an upcoming clinic visit or at other times to correct problems with quality of care and to improve care; such quality improvement data are presented to clinicians with suggestions regarding correcting apparent problems with the quality of care; or said interviewing mechanism provides brief and focused education, such that said interviewing mechanism educates a patient who does not know necessary information about said patient's health condition (such as a patient at risk for coronary heart disease not knowing meanings of chest discomfort, shortness of breath or other signs of a heart attack or a patient on aspirin not knowing early signs of gastrointestinal bleeding), or a patient who desires additional information about said patient's health condition.

71. (New) The system of claim 65, further operable to use patient data regarding severity of symptoms to calculate a severity index, in order to develop a scale where scores discriminate symptoms that are mild or severe or multiple, so that mild symptoms are not obscured, while ensuring that severe symptoms are still distinctly evident;

(a) wherein different levels of severity are assigned logarithmic values, such as mild equals 1, moderate equals 10, severe equals 100, and very severe equals 1000; and

(b) wherein symptoms from a similar region of a patient's body are grouped together, after which an arithmetic mean of values assigned to each group is computed, and individual scores and said mean are reported to facilitate interpretation by a clinician with regard to possible relative importance of a symptom group and, given values and means of a particular group across successive interviews of said patient, possibly significant changes in severity over time.

72. (New) The system of claim 65, configured to support and facilitate clinical and health services research in practice settings by enabling patient recruitment, and further operable to:

(a) automate patient recruitment for research trials;

(b) query patients during routine use of said system as to whether said patients would like to be informed regarding research studies for which said patients are eligible;

(c) receive eligibility requirements for research studies and use system logic to identify patient responses regarding when one or more of symptoms and medical conditions that may qualify patients for a research study; and

(d) inform a patient and a research coordinator of studies for which said patient is eligible.

73. (New) The system of claim 72, further operable to obtained informed consent from said patient who agrees to participate in research using interview content approved by an appropriate Institutional Review Board.